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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,532	12/27/2004	Pavel E. Kazin	18744-0028	2536
<div>29052      7590      06/19/2007</div> <div>SUTHERLAND ASBILL &amp; BRENNAN LLP</div> <div>999 PEACHTREE STREET, N.E.</div> <div>ATLANTA, GA 30309</div>				
			EXAMINER	
			KOSLOW, CAROL M	
			ART UNIT	PAPER NUMBER
			1755	
			MAIL DATE	DELIVERY MODE
			06/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/519,532

**Applicant(s)**

KAZIN ET AL.

**Examiner**

C. Melissa Koslow

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-9,16 and 17 is/are allowed.
- 6) ☒ Claim(s) 10-15,18 and 20 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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This action is in response to applicants' amendment of 11 May 2007. Applicant's arguments with respect to the definition of M, X and V in the specification have been fully considered and are persuasive. The previous objection to the disclosure has been withdrawn. Based on applicants' arguments, the art rejection is withdrawn. The amendment to the claims have overcome the 35 USC 112, second paragraph rejections over claim 3 and the definition of variables A, X and M. Applicant's arguments with respect to the remaining rejections have been fully considered but they are not persuasive.

The amendment to the claims filed on 11 May 2007 does not comply with the requirements of 37 CFR 1.121(b)(1)(ii) because the amendment to paragraph [0010] (Page 3, lines 6-10) is not marked. Amendments to the claims filed on or after July 30, 2003 must comply with 37 CFR 1.121(b).

The disclosure is objected to because of the following informalities: The conjunction between "Br," and "I" in amended paragraph [0010] is missing. Appropriate correction is required.

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 18 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

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The amendment to the claim did not overcome the rejection is “the method of use of a compound comprising using said compound as pigment, paint or coloring additive” is not a proper process since there is no actual steps. A proper process claim would be “A method of coloring a material comprising adding the pigment of claim 16 to the material”. The rejection is maintained.

Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification teaches on page 3 that X is a fraction of  $\text{Cu}^+$  and/or  $\text{Cu}^{2+}$  cations and  $\text{O}^{2-}$  ion mixed with anions such as  $\text{OH}^-$ ,  $\text{F}^-$ ,  $\text{Cl}^-$ ,  $\text{Br}^-$  and  $\text{I}^-$ . This claim teaches X is a mixture which includes one of  $\text{Cu}^+$ ,  $\text{Cu}^{2+}$ ,  $\text{O}^{2-}$ ,  $\text{OH}^-$ ,  $\text{F}^-$ ,  $\text{Cl}^-$ ,  $\text{Br}^-$  and  $\text{I}^-$ . This amendment is new matter since it defines X as any compounds containing the listed ions, and not just those disclosed in the originally filed disclosure.

The amendment to this claim did not overcome this rejection.

Claim 15, 18 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 provides for the use of the compound of claim 1, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

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Claims 15 and 20 are indefinite since claim 15 is directed to the process of making the compound of claim 1, but it does not give a source of vanadium and claim 20 is the pigment produce by the process of claim 15, which is that of claim 1. Claim 1 teaches A is phosphorous, vanadium or a mixture thereof, but the process of claim 15 would only produce a compound having the formula  $M_5(PO_4)_3X$ . Thus it is unclear how the process of claim 15 could produce all the compounds of claim 1. Applicants should rewrite the preamble of this claim so it does not refer to claim 1 and instead recited the formula of the compound produced by the taught process.

Finally, claim 18 is indefinite since it is unclear how the compound is used as a paint.

The amendment to the claim 18 did not overcome the rejection is "the method of use of a compound comprising using said compound as pigment, paint or coloring additive" is not a proper process since there is no actual steps. A proper process claim would be "A method of coloring a material comprising adding the pigment of claim 16 to the material". The rejection is maintained.

Claims 10-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicants argues the process of the U.S. patent 2,664,401, which is identical to the that claimed, will not produce the claimed compound. In addition, the article by Patel et al cited by applicant in the information disclosure statement teaches a process identical to the process of claim 10, but the resulting process does not produce the claimed compound. Therefore, it appears

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the process of claims 10-14, as claimed, will not produce the claimed compound. It appears critical processing steps, conditions and/or limitation are missing from these claims.

Claim 19 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 16. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim 19 is identical to claim 16 since the process of claim 10 produces the compound of claim 1. Thus both claims 16 and 19 are directed to pigments comprising a compound of claim 1.

Claims 1, 3-9, 16 and 17 are allowable over the cited art of record.

Claims 15 and 20 would be allowable if claim 15 was rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

There is no teaching or suggestion of a compound having the claimed formula where copper oxides, hydroxide and/or halides are present in the hexagonal channels of an alkaline earth phosphate and/or vanadate apatite. There is no teaching or suggestion in the cited art of record of the process of claim 15.

Applicant's amendment and arguments necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

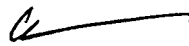
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cmk  
June 15, 2007

  
C. Melissa Koslow  
Primary Examiner  
Tech. Center 1700